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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,592	04/14/2004	Kathryn W. Ybarra	DYCOOK.015C1	8173
7590 12/05/2005			EXAMINER	
SQUIRE, SANDERS & DEMPSEY, L.L.P.			BARKER, MATTHEW M	
Two Renaissance Square			ART UNIT	
Suite 2700			PAPER NUMBER	
40 North Central Avenue			3662	
Phoenix, AZ 85004-4498			DATE MAILED: 12/05/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/825,592	Applicant(s) YBARRA, KATHRYN W.	
	Examiner Matthew M. Barker	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Paragraph refers to the processor as reference number 202; the processor is labeled 204 in the drawings.

Appropriate correction is required.

Claim Objections

2. Claim 1 is objected to because of the following informalities: in line 6, there is insufficient antecedent basis for the language "the transmitter". Line 1 introduces "a plurality of transmitters", however the claim does not specify if "the transmitter" is intended to be one of the plurality or not. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3-4, and 23-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 3 and 23, it cannot be determined how "in accordance with the formation model" relates to the "step for revising a parameter of the distribution model".

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Claims 4 and 24 depend on claims 3 and 23, and are therefore also rejected as being indefinite.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 11-27, and 30-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Oey et al. ('453).

Regarding claims 1 and 21, Oey discloses the claimed system and method including the steps of: receiving a plurality of signals (column 20, lines 9-19); determining a distribution model of a distribution of transmitters (column 19, lines 17-28); determining a formation model of a formation in which the transmitter is positioned (column 21, lines 33-41); determining a total transmit power, and transmitting not more than the total transmit power (column 21, line 60 – column 22, line 9).

Regarding claims 2 and 22, Oey discloses the distribution model is consistent with conventional interference limiting for aircraft traffic collision avoidance (column 19, lines 12-18).

Regarding claims 3 and 23, as best as the claim can be understood, Oey discloses the claimed method of revising a parameter and determining the total transmit power (column 21, lines 52-62).

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Regarding claims 4 and 24, Oey discloses the claimed parameter (column 19, equations 4 and 5).

Regarding claims 5 and 25, Oey discloses that the transmitter and at least one other transmitter are part of a formation (column 19, lines 51-52), where the formation model comprises a magnitude in accordance with a distance between transmitters ("position" column 19, lines 53-54).

Regarding claims 6 and 26, Oey discloses that the formation model comprises a magnitude in accordance with an altitude of the transmitter (column 19, line 54).

Regarding claims 7 and 27, Oey discloses the claimed count of formation members (column 1, lines 57-60).

Regarding claims 8, 20, 33, and 35, Oey inherently makes all of the formation model and distribution model counts by determining the range of all targets.

Regarding claims 11 and 30, Oey discloses a step for determining receiver sensitivity for receiving (column 22, lines 40-42).

Regarding claims 12 and 31, Oey discloses transmitting in accordance with air traffic control radar beacon system signaling (column 3, lines 24-26).

Regarding claims 13 and 32, Oey discloses transmitting in accordance with Mode S signaling (column 3, line 5).

Regarding claims 14 and 18, it is inherent that the system of Oey includes a memory; memory is required to store instructions for the processor.

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Regarding claim 15, a transponder comprising a processor, receiver, and a transmitter is the inherent device for performing the method of claim 1, thus claim 15 is rejected on the same grounds.

Regarding claim 16, Oey discloses the claimed TCAS system wherein the processor tracks nearby traffic and initiates annunciations to a display (column 10, lines 62-64).

Regarding claims 17 and 34, Oey discloses the claimed method including the steps of: receiving location information (column 20, lines 9-19); determining a distribution model of a distribution of transmitters (column 19, lines 17-28); determining a formation model of a formation in which the transmitter is positioned (column 21, lines 33-41); determining a total transmit power, and transmitting not more than the total transmit power (column 21, line 59 – column 22, line 9); and a step for determining a receiver sensitivity for receiving (column 22, lines 40-42), and a step for maintaining a track of a vehicle (column 22, line 19).

Regarding claim 19, Oey discloses the claimed TCAS system wherein the processor tracks nearby traffic and initiates annunciations to a display (column 10, lines 62-64).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oey as applied to claims 5 and 25 above, and further in view of Stayton et al. ('578).

Oey does not disclose the claimed transmitter mode selection between at least one of an active interrogating mode and a passive non- interrogating mode, wherein selection is in accordance with distance.

Stayton discloses a step where if a RA (i.e. potential collision) is detected, the system will select active mode, otherwise the system remains passive (column 13 line 59 – column 14, line 2). It would have been obvious to modify Oey to include the mode selection of Stayton in order to reduce interference caused by active interrogation.

8. Claims 10 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oey as applied to claims 1 and 21 above, and further in view of Broxmeyer ('591).

Oey discloses limiting transmitting in accordance with the total transmit power as discussed in claim 1 above. Oey does explicitly not disclose transmitting first and second priority messages.

Broxmeyer discloses transmitting first and second priority messages (Column 15, lines 16-19). It would have been obvious to modify Oey to prioritize messages as taught by Broxmeyer in order to transmit critical information before non- critical information to help avoid collisions.

Conclusion

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9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sturm, Ybarra('250), Ybarra('997), and Funatsu relate to air traffic collision avoidance.

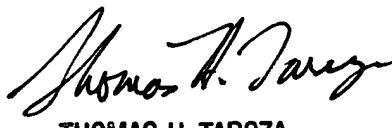
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew M. Barker whose telephone number is (571)272-3103. The examiner can normally be reached on M-F, 7:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MMB

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